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Principal Findings from a Study of the Expanded Program on Immunization in the Dominican Republic

Introduction

The CHANGE Project (funded by USAID), with the Secretariat of Public Health (SESPAS), the Government of Japan (Overseas Development Agency/JICA), the Pan American Health Organization (PAHO), UNICEF, and other partners, is taking advantage the introduction of pentavalent vaccine (the "penta" – DPT, hepatitis B, and Hib) in the Dominican Republic to strengthen the Expanded Program on Immunization (EPI). These organizations undertook a series of activities in 2001 and 2002, including communication on the introduction of pentavalent vaccine, the re-design of the immunization card, a review of EPI norms, the preparation of an immunization manual for health workers, and technical training on all aspects of EPI in all provinces. Finally, with the research firm AlConde, CHANGE planned a quantitative/qualitative study on the EPI to obtain information on its strengths as well as on barriers to increasing coverage. This summary provides the principal results of the study, carried out by AlConde in December 2001 and January 2002, and their programmatic implications for the EPI.

The Study

Research Objectives

- Explore perceptions, experiences and expectations among the population concerning the provision of immunization services (in campaigns and fixed posts).
- Determine the population's problems of access to immunization services (time, availability of services, cultural accessibility).
- Identify other barriers to getting immunized in routine services.
- Explore knowledge and perceptions (graphic literacy) on the use of the immunization card.
- Identify knowledge and perceptions of the population regarding the combined Hib vaccine (pentavalent) and motivations to receive it.

Methodology

To achieve these objectives, a study in two phases was carried out: 5 focus group discussions (the qualitative part) and a quantitative survey. The persons surveys were mothers with children 6 to 16 months old. The mothers had to belong to social classes E (low) or F (marginal) in poor neighborhoods of five cities (including the capital) and also in rural areas near five cities in the interior of the country. 600 interviews were completed, distributed as follows:

Population	No. of Interviews	Urban	Rural
Santo Domingo	200	200	
Elías Piña	100	50	50
Montecristi	100	50	50
La Romana	100	50	50
San Francisco de Macorís	100	50	50
Total	600	400	200

Based on AlConde's experience in such studies, and utilizing the information furnished by the EPI, a draft of the questionnaires was presented to be discussed among the interested organizations. After various days of discussion, the questionnaire was approved. It was then submitted to a pre-test by means of 30 interviews carried out in two neighborhoods in Santo Domingo and in Guanuma in the outskirts of the National District.

Once the questionnaire was pre-tested and approved, the training of all personnel began. After training, each interviewer carried out two test interviews to determine if s/he had mastered the questionnaire and its use. On the first work day, interviewers were limited to five interviews, after which the process was stopped for 24 hours to critique the questionnaires extensively and to make corrections in the field.

The communities and homes were selected completely at random. Three supervision systems were used. The data collected was tabulated electronically. Analysis and interpretation were carried out by the Research Director.

Principal Findings and their Implications: Perceptions and expectations on the provision of immunization services: problems of access/barriers to receiving immunizations.

Availability of vaccine: The major problem that this study revealed is the lack of a reliable supply of vaccine in the health facilities, especially outside of Santo Domingo. The mothers in all of the focus groups mentioned this problem various times. In the survey (question #25) 60.2% of the mothers agreed that "sometimes they don't have the vaccine that I need." Although 93.6% were able to immunize their child the last time they tried, 73.6% of the reasons why the 6.4% could not was the lack of vaccine that they needed. What one mother said in a focus group expresses the general opinion on this: when we arrives to have our child immunized, the health staff says, "there is none, come back tomorrow!"

This problem constitutes an important barrier to improving coverage and maintaining public confidence in the EPI. The availability of vaccine is a problem that requires immediate attention from the EPI. First, there is a need to clarify if the problem is related to the open vial policy (and/or the manner in which health staff follow the policy). Also, the EPI needs to learn if the problem was worse in the past or if it continues as a serious problem. (The 93.6% that managed to have their child immunized the last time does not seem so bad.) Depending on where the bottlenecks are (at the national, provincial, or local level), the EPI should take appropriate remedial steps. Also, the EPI should monitor the situation of vaccine supply at all levels.

There are other reasons why many mothers come to immunize their children but cannot do so or can only with difficulty. 25.3% of mothers said that at times mothers go to the health post and find it closed when they arrive; 23.7% say that sometimes the doctors aren't there; 69.2% say that they have to wait a long time; and 40% say that sometimes they don't immunize because the child is sick. From "missed opportunity" studies in the region, we know that the majority of such refusals to immunize "for illness" are false contraindications, not a valid justification to refuse to immunize the child. In total, some 50.5% of mothers interviewed had arrived at a health post to get a child immunized but could not.

Perhaps, in every immunization post, the EPI could monitor how many hours in the month the facility was not open and offering all vaccines. The facilities with problems can be helped to resolve them.

Health staff: Mothers' opinion on the manner in which the health staff treat them is quite positive in general (more positive than in other countries). 97.4% of those interviewed said that they had been treated well or very well, and 92% of that group said that they are always treated that way. There are some problems in good communication, but they do not appear to be very serious except in one province (La Romana).

Results	**%**
Was not rude	97.7%
Was well mannered	97.7
Was nice	96.7
Was not mean	96.0
Was not annoying	95.8
Was respectful	95.0
Wanted to give service	94.8
Was kind	90.5
Informed about vaccines	83.0

Paying for vaccines: This was mentioned various times in the focus groups, but did not appear to be so common in the survey (7.8% according to question #27). What is not clear is why 14 (of 599 mothers) had paid for immunizations in public facilities. The EPI should find out what occurred and take steps to prevent this from happening in the future.

It is also interesting to note mothers' preference for immunization services in fixed posts and their lack of confidence in the people who vaccinate during campaigns ("they don't know how to give injections"), because some are not the regular health staff.

The EPI should decide if this is a problem that hinders effective coverage during the campaigns.

False contraindications. There are indications that some health staff in fixed posts, as well as in campaigns, follow false contraindications (especially regarding immunizing sick children) and use poor technique in immunizing (various reports of abscesses, of immunizations "poorly given"). Some mothers in focus groups mentioned their fear of health staff who are so poorly prepared that they are capable of giving the wrong

vaccine.

The program should remind all personnel, via training as well as follow-up and monitoring, about the true contraindications and should improve the system for monitoring abscesses and other indications of poor vaccine administration. It would be useful to ask various health workers if they are in agreement with the contraindication norms and if they are following them (and if not, why).

Knowledge and perceptions regarding the new vaccine

Knowledge of diseases: In general mothers have very poor knowledge regarding meningitis and other diseases preventable by vaccines. Although it is highly desirable that mothers know more details about the diseases, the lack of this knowledge does not appear to influence their seeking immunizations for their children. They consider immunizations to be very important and understand that they protect against very serious diseases. It does not appear, therefore, that the program should give much priority to addressing mothers' lack of knowledge regarding the diseases.

Pentavalent vaccine: Virtually all mothers like the idea of getting more protection with less effort ("just one jab"), but a small group (less than 5% in the survey, various mothers in one focus group) are worried that 5 doses together may be dangerous (too strong, might cause "attacks" or "shock") and cause more side effects.

This is a barrier that communication messages could address, or the EPI might decide to wait to see how the public accepts the new combined vaccine, since so few mothers in the study were concerned. This concern should also be addressed in the discussion of interpersonal communication in the training module, so that health workers are comfortable in responding. Also, the messages as well as health worker training need to clarify that Hib has nothing to do with HIV (SIDA in Spanish). To avoid confusing the public, it is preferable not to use "Hib" in materials such as the immunization card and posters on the pentavalent vaccine; it is beter to refer to the vaccine against meningitis and pneumonia, diseases that mothers are concerned with.

The great majority of mothers already believe that meningitis is a serious disease, and more than 98% want their children vaccinated against it and pneumonia. The principal motivations for seeking the pentavalent vaccine are: protection against those diseases, not having to suffer from so many injections, and not having to go so often. Another motivation, that emerged in focus groups, is that mothers take advantage of immunization trips to "pasear" (go for a walk, go shopping, etc.)

Logistical knowledge: It is essential that each mother know where to take her child to be immunized and when it is time for the next dose. 17% of mothers responded that during their last visit, the health worker did not inform them about the vaccines. It is also important to point out that the poorest mothers sometimes had difficulty giving their child's precise age, which could make it more difficult for them to know when to return for the next immunization.

Knowledge and perceptions regarding the immunization card: graphic literacy

The other channel for this information on where, when, and which vaccines are due is the child immunization card. An important finding of this study is that many mothers, including almost half of literate mothers, cannot understand basic information on the card. These mothers cannot, therefore, use the card as a reference. 66.3% of the 599 survey mothers could read. On looking at a "typical" card filled out by the researchers to test their comprehension of the information:

- 44.3% of all mothers could say which vaccines the child had received (53.1% of the literate mothers);
- 49.3% could say how many immunization the child had (58.9% of literate mothers);
- 44.8% could say the date of the next immunization (53.3% of literate mothers).

(All of these figures were higher in the capital than in the provinces.)

This finding is a strong argument for simplifying the card, for teaching mothers how to interpret it, and for no depending only on the card to communicate this information.

Not bringing cards: Focus group discussions indicated that mothers not bringing the card was a problem. In the survey, 19.6% (#54) said that they had forgotten to take the card at least once (but only 2.5% the last time). It is possible that mothers did not bring it because they didn't feel its importance. Perhaps the EPI should stress its utility and importance in communication messages.

The survey did not ask "for whom is the card," but considering the number of mothers who cannot utilize it, we can conclude that for half of the mothers the card does not do what it is intended to do: educate and remind mothers about the immunization schedule.

Timeliness of immunizations. It appears that there may be a problem with timeliness of immunizations. Of the 428 children with a card at the time of their mothers' interview, 36.7% had their immunizations up to date. This situation is related to the information that the health worker gives the mother and to the difficulty in mothers interpreting the card information. The EPI should devise and test creative solutions to this problem.

It is also possible that the examination of the cards did not reflect the real situation because during campaign days last year, the immunizations given were not recorded on the cards. Thus, it is possible that some of these children had received immunizations that were not recorded on their cards.

Mothers' motivation: What is impressive is mothers' strong motivation to have their children protected against vaccine-preventable diseases. At the same time, there is a danger that the problems with vaccine availability may lessen public confidence in the immunization program.

In summary, although various problems with the quality of services need to be improved, it is important to note that the attitude of the great majority of mothers remains very positive towards immunization. With reliable and friendly services, the EPI can maintain this good will.